# Effects of L-carnitine rich early diet on the esophageal cancer surgery in Ardabil hospitals city.


## Abstract

**Introduction:** Esophageal cancer is the 10th most common cancer in the world. Iran is the second country with the highest mortality rates of esophageal cancer in the Eastern Mediterranean.Since 3 decades ago, a lot of studies and clinical trials have been done to discover ideal nutrition and caring for patient identification.It is known that poor nutrition after esophageal cancer surgery increases the risk of complications. One fairly important nutritional factor for the human body, is L-carnitine. In this study, the effects of early nutrition rich in L-carnitine is discussed on the complication of esophageal cancer

**Materials and Methods:** This is a randomized single- blind clinical study by researcher. After selection of patients based on inclusion and exclusion criteria, their data will be formed as a check list. The total sample includes 50 subjects equally divided into 2 groups. Before the start of the study, basic blood and urine samples of 24-hour will be taken from each group. The first day, the experimental group will receive a postoperative diet containing 3 grams of L-carnitine per day in 3 divided doses. This will be given with every meal through jejunostomy & then orally (if tolerance), whereas on the first postoperative day, the control group will receive a diet without carnitine along with three meals ( hospital diet ) through jejunostomy & then orally (if tolerance). Blood samples will be taken 10 days after the regime starts. Postoperative complications in the two groups will be discussed as well as the changes in some blood factors such as blood cell count, and nitrogen balance will be examined. Finally, results will be analyzed by the statistical software.

**Results:** The average age in Intervention group was 59.5±8.5 and in Control group was 60.1±7.7 years. Approximately 54% of esophageal cancer patients in our study were male. L-Carnitine has no effect on some of blood factors. This nutrient also decreases serum BUN and improves Nitrogen balance in patients. Postoperative complications in both groups was almost identical and uncommon. L-Carnitine also decreases duration of hospitalization of patients.

**Conclusions**: *Finally, it seems that L-carnitine has no effect on blood cells. It decreases serum BUN and improves nitrogen balance of patients. It also seems that L-Carnitine decreases duration of hospitalization of patients.*



**Keywords**:*Carcinoma, esophagus, cancer, L-carnitine, nutrition, Nitrogen balance, Surgical complications*